

CLAIMS

1. A system for assisting in the regeneration of depollution means (1) associated with oxidation catalyst-forming means (2) and integrated in an exhaust line (3) of a motor vehicle diesel engine (4), and in which the engine (4) is associated with common rail means (7) for feeding fuel to the cylinders of the engine and adapted, at constant torque, to implement a strategy of regeneration by injecting fuel into the cylinders in at least one post-injection, the system being characterized in that it comprises:

- detector means (8) for detecting a request for regeneration (req.RG) and thus for post-injection;
- detector means (9) for detecting a stage during which the engine is idling;
- acquisition means (11) for acquiring the temperature downstream from the catalyst-forming means (2);
- determination means (8) for responding to said temperature to determine a maximum duration for the application of post-injections during a stage of idling; and
- reduction means (7, 8) for progressively reducing the or each post-injection as soon as the duration of post-injection utilization has reached the predetermined maximum duration of application.

2. A system according to claim 1, characterized in that the reduction means (7, 8) are adapted to reduce the or each post-injection in application of a calibratable slope.

3. A system according to claim 1 or claim 2, characterized in that the depollution means (1) comprise a particle filter.

4. A system according to claim 1, 2, or 3, characterized in that the depollution means (1) comprise a NOx trap.
5. A system according to any preceding claim,
5 characterized in that the fuel includes an additive to be deposited together with the particles with which it is mixed on the depollution means (1) in order to facilitate regeneration thereof.
- 10 6. A system according to any one of claims 1 to 4, characterized in that the fuel includes a NOx trap forming additive.
- 15 7. A system according to any preceding claim, characterized in that the engine is associated with a turbocharger (5, 6).